And When Nature Calls

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And When Nature Calls

Eating and excreting are mankind's two most basic biological functions and yet the vast majority of military historians when writing about the people who fought the battles and used the war machines seem to neglect or forget this very simple fact of life as most military books lack even the briefest inclusion of information on the subject.

Granted it's not a topic that needs to be covered in great detail but some little snippets of information would be helpful to gain a greater appreciation of what life was like during war. Leaving aside the obvious fact that soldiers and sailors can dispose their bodily waste anywhere on land or in the sea if necessary,

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what options did the bomber air crews and fighter pilots have? With the advances in aviation technology, the World War 2 fighter or bomber could stay in the air longer, and travel much greater distances than could the primitive air machines of World War 1. This, by necessity, required aircraft designers to incorporate some basic method of waste disposal for those who flew these new machines. Concentration on life and death tasks is well nigh impossible when the need to piss dominates and the cold at 26,000 feet and minus 60 below intensifies a man's pain for not relieving himself. The cold affecting the bladder at high altitude is murder.

Take for example the famous World War 2 British Lancaster bomber which is the most written about aircraft of the period yet it is extremely hard to find a book on the subject that even briefly gives information on any crew waste disposable facilities. Without going into too much detail, the following is an attempt to rectify this lack of information beginning with a typical Lancaster bomber on an operation over Germany.

This aircraft is in essence, a metal container for more than 2,000 gallons of pure petrol, plus another 150 gallons of oil; miles of pipeline containing highly inflammable hydraulic oil for controls and flaps, gun turrets etc. In the bomb bay, there might be between 8 to 10 tons of lethal high explosive and or pyrotechnic stores, 14,000 rounds of ammunition in extended alloy tracks which guide the belted ammunition to the gunner's turrets. There are oxygen lines, electrical wiring, intercommunication cables and a host of other fittings.

Inside this 'flying bomb' were 7 crew wearing layers of clothing designed to keep out the cold. These men took off night after night sometimes for a 6-7 hour stint in unpressurised aircraft to face enemy flak, night fighters, hostile weather conditions and accidents. Almost all Avro Lancaster Bombers were equipped with three Frazer-Nash [FN] hydraulically operated turrets using .303 calibre machineguns. The mid upper turret saw only limited use during the early months of the aircrafts introduction to operational service. The nose turret was rarely used and manned by the bomb aimer if required. The mid upper gunner spent the trip suspended on a canvas sling seat that could be disconnected when getting in or out of the turret. His lower body was in the draughty fuselage and his head in the plexiglass dome. It was a lonely position removed

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from the proximity of other crew but the worst position was that of the tail gunner which, during nightly 'ops' was the coldest, loneliest place in the sky. Whilst other crew members enjoyed some comfort having others nearby in the forward section of the aircraft, the poor rear gunner was completely removed from his fellow crew members and any heating system. Squeezed into a cramped metal and perspex cupola, the rear gunner had so little leg space that some had to place their flying boots into the turret before climbing in themselves. [1]

From take off to landing, at times for as long as ten hours, the tail gunner was constantly rotating the turret, scanning the surrounding blackness, quarter by quarter, for the grey shadow that could instantly become an attacking enemy night fighter. The rear gunner stowed his parachute in the fuselage behind his turret. Any relaxation of vigilance could mean death for everyone on board. Even answering the call of nature or 'being caught short' could mean disaster for the crew. This was especially true for the rear gunner as his position was the prime target for attacking enemy night fighters. Even if he needed desperately to piss or shit, he couldn't leave his post on an operation. The Lancaster, for some reason, was not equipped with piss [or relief] tube only an 'Elsan' chemical toilet a few feet forward from the rear gunner's turret. It was exposed, unreliable, uncomfortable and dangerous in rough weather or if the skipper had to take sudden evasive action. At 10,000 feet and above, anyone using the Elsan had to use a portable oxygen bottle for breathing as well. The crew would have to have had bottomless steel bladders to be able to maintain the constant vigilance necessary for each raid and not use the Elsan or some other container brought onboard by a crew member. The Elsan was hated by the aircrews because they had to use it and the ground crew because they had to empty it.

One unknown airman describes his hatred of the Elsan.

> *'While we were flying in rough air, this devils convenience often shared its contents with the floor of the aircraft, the walls, and ceiling and sometimes, a bit remained in the container itself. It doesn't take much imagination to picture what it was like trying to combat fear and airsickness while struggling to remove enough gear in cramped quarters and at the same time trying to use the bloody Elsan. If it wasn't an invention of the devil, it certainly must have been one foisted on us by the enemy. When seated in frigid cold amid the cacophony of roaring engines and whistling air, away from what should have been one of life's peaceful moments, the occupant had a chance to fully ponder the miserable condition of his life. This loathsome creation invariably overflowed on long trips and in turbulence was always prone to bathe the nether regions of the user. It was one of the true reminders to me that war is hell.'*

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Crew members had to make do with various containers such as beer bottles to piss into during the flight.

With regards to the use of the Elsan toilet, there are two stories that are reputed to be true. One is about some members of the RAF conducting biological warfare by jettisoning used Elsan toilets with their normal bomb payload on German targets. The other is about one Lancaster crew who took one of the Women's Auxiliary Air Force on an operation. This was strictly against regulations but more than likely happened a few times. The WAAF passenger was 'caught short' and as the Lancaster was at 10,000 feet, the mobile oxygen bottle was necessary during her ablutions. Unfortunately for her, the oxygen bottle wasn't working properly and she passed out from lack of oxygen. The crew only discovered her on their return leg over the English Channel. All efforts to revive her failed and as they couldn't find a pulse, they thought she was dead. They were contemplating throwing her overboard when one of them finally found the elusive pulse. They revived her just before landing and were able to smuggle her back to her barracks. One very lucky lady indeed!

On the subject of luck and as they were dicing with death almost nightly, it was not surprising that thousands of air crew became superstitious and began to believe in good luck charms of one kind or another. It was not unusual to see crews 'watering the wheel' before taking off on a raid. This ritual involved pissing together on the bombers rear wheel for luck and possibly to eliminate the necessity having to piss again during the flight.

Another example is that of a Halifax II bomber.

> *'Arriving out at the aircraft, everyone relieved themselves, mostly on the rear wheel and some on one of the main wheels, partly for good luck. The Elsan chemical toilet was down in the tail and though we did some long trips, I don't remember any of the crew using it. We could use the flare chute but some of the crew took an empty bottle with them in case of emergency. On one trip, we had trouble with the Exactas which hydraulically controlled the propeller pitch. It lost fluid so we had to pee in them to keep going. One of my buddies 'Junior' Braybrook claims the best of all, having to use the Elsan while on a raid over Berlin.'* [2] *– Edward M. Cooke. Halifax II pilot.*

Americans bomber crews suffered the same problems as their British cousins with simular methods of disposal.

Boeing B 17 Flying Fortress. *'A sometimes humourous and usually urgent problem encountered was the elimination of liquid waste. On combat missions, we were often frightened and urine accumulated in large amounts during long missions. The outlet provided was a funnel and tube located in the bomb bay, which opened to the external air stream. This facility was used mostly by the pilots, flight engineer and radioman*

because of the easy accessibility to them. Other crew members had some access problems, especially when encumbered by oxygen hook-ups. Some carried sizeable cardboard food containers for such use.'

> *'No matter how scared I was, my retention capacity had been sufficient during early missions to get me back to the grass around the parking revetments at Nuthamstead without urination.[3] On one long mission however, my capacity for retention was exceeded and I filled and overfilled the relief tube. The mess left on the bottom of the fuselage was the subject of considerable discussion during subsequent flights. Another necessary caution on urination was to warn the ball turret gunner if the relief tube was to be used. The stream of urine from this tube impacted onto his turret while flowing in the air stream. At high altitudes, it froze as a yellow cloud on his turret. The instruction was to warn him about your intention so that he could turn his view screen away from the relief tube. When not warned, his guns were useless since he had no visibility until the yellow cloud melted at lower altitudes. Often, forgetful urinators were cursed roundly by the ball turret gunners.' [4]*
> *– Bill Frankhouser, Navigator.*

B-17.

> *'Returning from a mission over Germany, my crew had the trots and took it in turn to crap in a cardboard box which was quickly jettisoned. As the box fell, it hit the windscreen of a trailing B-17 in the formation and lodged frozen solid blocking the pilots view. Upon returning to base in England, the pilot had to land his aircraft by sticking his head out of the cockpit side window.'*
> *– Bill Markum. Pilot.*

B- 17

'The extreme cold of this northern European winter, the coldest in over a century, was especially treacherous at altitudes of twenty to thirty thousand feet. I cannot remember which mission, but I was almost done in by the cold in a manner that could only be described as an 'absurdity.'

'One problem of long missions was the need to empty our bladders at least once. Most of the Fortresses had a 'piss tube' in the nose section, which was convenient for the navigator and bombardier. This consisted of a slender hose with a funnel shaped end which was fitted to an aperture in the floor. As urine was run through the tube it turned to ice and dropped like topaz coloured hail to the ground, I liked to imagine every time I urinated over Germany, my acidulous projectile would plink on some Nazi burgher's Aryan nose. On one mission we flew in a substitute Fortress -maybe it was the Heilbronn mission and our aircraft had no relief tube in the nose section. I had to hook up to a small walk around oxygen bottle to take me back to the catwalk through to the bomb bay. The engineer opened the bomb bay doors for me to pee out of and I had to remove my gloves to unzip my fly. So quickly did my fingers turn icy numb that I was unable to grip the zipper tab to perform this banal operation. The cold surge of air coming up through the open bomb bay caused me to sway dangerously on the cat walk and now it was even more futile attempting to unzip my fly. I don't know how long I stood there looking down on some German forest 25,000 feet below. It must have been long enough to cause the radio operator to wonder about my safety. I was beginning to pass out from lack of oxygen; the walk around oxygen bottle must have been close to empty from the start. T/Sgt Pepper immediately recognised what was happening, grabbed another oxygen bottle and attached it to my mask just in time to prevent me from being becoming a human bomb falling onto some undesignated German target. The providential radio operator helped me with the rest of the operation and I returned to my navigational duties in the nose.' [5]

– Leon Schwartz, Navigator.

B-17- Ball turret.

> *‘To overcome the problem of relieving myself, I had found an old oxygen mask hose which was about an inch and a half in diameter and had run it up and through one of the slots that discharged the spent machine gun bullet casings. On my first attempt, I wasn’t very successful. It worked fine except I had the turret in the wrong position and was sprayed by my own urine. After that, I quickly learned to put the turret in the correct position when I need to pee.*
>
> - *Lester Schrent. Gunner.*

The Boeing B-29 Superfortress was such a tremendous improvement over anything previous, especially creature comforts with its pressurised, air-conditioned and heated crew compartments. The B-17’s and the B-24’s over Europe even during summer flew in temperatures that were pure misery to the gunners.

B-29.

'For the long flight, we were provided with sandwiches and coffee, and Benzedrine tablets to keep us awake. In the forward end of the aircraft, there was a cylindrical canister with a funnel and a rubber tube into which we could urinate. In the radar compartment aft, there was a chemical toilet which we were reluctant to use because the poor radar operator would almost die from the odours. On the return flight we all were suffering from dysentery, sometimes mild sometimes severe and as a result, the forward urine canister was full and overflowing. So was the chemical toilet in the radar compartment. There was a plug-sealed tube from the flight deck floor through which smoke and signal flares could be dropped. Since we were at an altitude where we were depressurised, I left my pilots seat, got onto my knees over the whole of the deck, removed the plug, and attempted to make use of this ad hoc urinal.'

'Unfortunately, air rising in the tube blew everything back in my face. As the plane buffeted along, I was soaked, as was the surrounding area.'

'The whole crew was trying to hold back the 'runs' or 'trots' so we decided to open the bomb bay doors and to take it in turns to do what needed to be done in a more or less 'bombs away' fashion. Again air turbulence in the bomb bay was not kind to us and we ended up coating every nook and cranny of the bomb bay. What did make it into the slipstream streaked the underside of the aircraft and we would pay the price. The odour was forever with that plane and in the 120 degrees in the shade in India where our base was located, it was intolerable. The following day after our arrival back at base, we spent most of the day in the hot sun trying to clean up our airplane. So much for the glamour of combat flying.' [6]

– Charles L. Long. Pilot.

At this point we change from bombers to fighters. How did the fighter pilot cope with the call of nature? Apart from taking some form of container to piss into, the pilot would use the aircraft's relief tube in the cockpit. Its location varied with the aircraft but this method of relief was fine if the pilot only needed to piss as a fighter was not usually in the air that long. However, the situation changed when fighters using long range drop fuel tanks began escorting bombers on long distance operations, then the problem of shit was solved by simply changing ones clothes and flight suit at the earliest possible opportunity.

de Havilland Mosquito DH 98.

'In the Mossie, the relief tube was a flexible hose connected to a pipe under the pilot's seat on the right [navigator on the left]. The top was funnel shaped with about half or three quarters of an inch diameter hose which could accommodate any young man with a good stream capacity. The hose was in turn connected to a container also under the pilots seat. There was naturally no place to defecate so one would either hang on or if the worst came to the worst, change ones clothing immediately after landing back at base.' [7]

– Robert Kirkpatrick. Pilot.

P 47 Thunderbolt.

'We were coming out of Germany and I had to relieve myself. I unbuttoned my flight suit and pants and reached under the seat for the relief tube. Just then someone called in enemy aircraft at 9 o'clock and coming in fast. I immediately broke hard left into them. We all went round and round but had to break away as we were low on fuel. In the excitement of the moment, I had forgotten about relieving myself. I joined the others and flew home. When I parked the aircraft, the crew chief as usual, jumped up on the wing to help me out of the harness and enquire about the status of the plane. He got next to the cockpit then suddenly stepped back. I wondered why he wasn't taking the harness straps off and putting them behind the seat as he usually did. I looked down to hit the quick release on my parachute and saw the problem. I had a hell of a time trying to explain what happened. That damn crew chief went round with a smile on his face for a week.' [8]

– LeRoy Glover. Pilot.

North American P51 Mustang.

'A day in midwinter 1944-45 with a bright and clear sky over Europe at 28.000 feet. Below us lies solid snow white stratform clouds. Three hours has brought my fighter squadron escorting heavy bombers on a mission, deep into enemy German territory. The air temperature outside on the canopied cockpit of the Mustang fighter, is at least-40 degrees Fahrenheit at this altitude. Body comfort in the cockpit depends on having at least two layers of clothes under the flying suit and heavy boots with leather gloves under the gauntlets.

My bladder has been sending urgent messages for the last half hour to evacuate the remnants of last night's over indulgence in English beer. Responding reluctantly to the 'Maximum Tolerance Pressure' I prepare. I sweep the sky visually, move the other members of the flight into a loose formation and trim the plane for straight and level flight.

The second part of the drill is to loosen the restricting crash straps, and impatiently locate the funnel shaped relief tube clipped under the bucket seat then hopefully place it between my thighs. Finally, I probe through two zippers and long underwear for the organ of my discontent. The offending organ's head retracts in terror and revulsion when it feels the cold glove. Precious moments are lost warming the rejected hand and enticing the reluctant digit to pour forth its voluminous donation into the receptive relief tube.

Oh no! The exterior exhaust end of the relief tube is iced up. There I sit, half finished, holding a container of steaming urine in my hand. My dilemma is abruptly terminated by an urgent radio call from my wing man. Red Leader, bandits seven o'clock high, coming in on your tail. Break left!

Disregarding everything, I grab the throttle and control stick and snap into a defensive Lufberry turn. The unconfined liquid splashed onto the windshield and canopy, freezing instantly. Tearing the gloves off my hands with my teeth, I frantically scratched at the yellow coating of ice restricting my visibility. At the same time, I kept my aircraft trembling on the edge of a high speed stall. My unrestricted visibility returned after the longest and busiest five minutes of my life, to reveal an empty sky. The lonely flight back to base, plus landing, proved uneventful.

My crew chief waited faithfully as I taxied back to the revetment area. After I parked and opened the canopy, this imperturbable mechanic stood on the wing and leaned into the cockpit to help me unbuckle all the straps. He sniffed the air like a bird dog and casually remarked;.It smells like you wus awful scared cap'n.' [9]

– Larry Dissette. Pilot.

Chance Vought F4U-4 Corsair.

> *'The Corsair had a relief tube attached to the control stick. The problem was that at any altitude say above sea level, the discharge was frozen. You would just get started to a point you could no longer stop it would fill up and run over.'* [10]
>
> *-Owen Dkyema. Pilot.*

The story of human waste disposal in World War 2 aircraft is not complete without mentioning at least one of the other basic human functions associated with piss and shit. It's something women are always complaining bitterly about when done in company or public by men who, in some cases, take pride in being able to reduce a room full of adults to tears. The medical term is flatulence, but farting, breaking wind and a host of other nicknames.

de Havilland Mosquito.

> *'One problem we had in the squadron for awhile was being fed great quantities of Brussel Sprouts at meal times. They seemed to be supplied by the railroad car load. This particular vegetable even at a little altitude could generate great quantities of internal gas. The Mossie had no cabin ventilation except for a small thing that could be opened on the pilot's side in case the windscreen was iced or oiled over. In the confined space of a Mosquito cockpit, the effects could be quite unsettling to say the least.'* [11]
>
> *-Robert Kirkpatrick. Pilot.*

Halifax .

'I do remember the medical officer telling us about gas, that it was formed in the gut which could be subject to being stretched by gas build up which would cause severe pain which could happen when descending from altitude. We were urged to get rid of any gas at all costs. It was also advised not to land with a full bladder as if one crashed, the bladder could burst.' [12]

-Edward M. Cooke. Pilot.

When nature calls, some situations can cause a lot of laughter back in the mess hall. A few months after D-Day one English pilot of a Dakota often had the job of flying VIP's over France. On one occasion, some senior officers had a female ATS sergeant with them. The toilet arrangement for these flights consisted of an Elsan with a hessian screen rigged around it at the back of the aircraft.

During the flight, the female sergeant with the party came forward to the flight deck and asked if she could use 'their' toilet instead. The pilot wondered where she thought they had room for such a facility but showed her the 'tube' outlet and told her if she could find a way to use it, she was welcome.[13]

-Stan Hilder.

Modesty is one of the early causalities of military life and when nature calls and requires exposing one's private parts to do what must be done in front of other people is difficult under any circumstances. To all those who flew during World War 2, this was just one more hazard amongst the many they had to contend with and for that reason alone, the subject should be mentioned more often.

Footnotes.

1- A common term for the rear gunner was 'Arse End Charlie.'
2- 102 Squadron RAF.
3- Nuthamstead was located in Hertfordshire,England.
4- 603rd Sqn US 8th Air Force.World War11 Odyssey Chapter XV Hamiltons 1997.USA.
5- 100 Bomb Group [Heavy] USAF. [100thbg.com]
6- 25th Squadron, 40th Bomb Group, 58th Wing of the 20th Air Force. USAF.
7- 464 RAF Squadron.

8- Spitfires, Thunderbolts, and Warm Beer; An American Fighter Pilot Over Europe. Phillip.D.Caine, Page 195. Potomac Books Inc [formally Brassey's Inc] USA.www.potomacbooksinc.com
9- A Luftberry turn or circle in World War 2 literature is referred to as a turning engagement between aircraft. It was a common defensive air combat tactic.
10- Owen Dkyema USAF.
11- RAF 464 Squadron.
12- 102 Squadron.RAF.
13- Stan Hilder. Isle of Wight. Courtesy -Britain at War magazine-Issue 48, page 26.

Photo Reconnaissance Mk XVI Mosquito cockpit diagram. Courtesy-Brett Redway. Point Cook Mosquito Restoration Project, Victoria, Australia.

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